rules based on a search strategy; and 2) Work and Overview are static in contrast to the invention's dynamically determining at run-time the selection or order of said resources according to the production rule.

Work shows a system with conventional rules. This is similar to the prior art described in the application. Overview shows a database with production rules.

Applicants submit that the Office Action improperly used hindsight taught by the present invention in arriving at the claimed combination of Work and Overview. The combination is not obvious - mostly because at the time of the invention, commercially operable web-search systems did not explicitly use production rules and commercial databases typically operates with "submit query", "add constraints", "use pre-programmed choices". The idea to provide arbitrary variability was not common, although clearly not unheard of at the time - as per Work. The Office Action's suggestion to redo Work as a production rule-based system was not obvious and not feasible given that Work focuses on permanently modifying specific data stores - something not typically addressed within production rule systems. If Work had wanted to have an explicit search strategy sent with the query – the Work system design would have been fundamentally different than the system shown in Work. For example, Work favored the more typical approach to varying system behavior of using configuration files and user-defined variables set off-line prior to the query. Work is a different way of accomplishing the goal of empowering the user to alter the originally predefined behavior - however, Work's approach is clearly different and is not based on production rules.

To help clarify the subtle and important distinction between Work/ Overview and instant invention, we can imagine a typical production rule based system (such as

Overview) as a black box - which contains some set of production rules and uses these production rules to control the behavior of the system such as that described in claim 1. In the instant invention, at run-time, additional production rules are added into the black-box from the outside, augmenting the existing rules resulting in an alteration of the behavior of the system for that query. Each query might augment the original rules in different ways by sending a different search strategy. Work, if it were implemented as a production rule-based system would also be a black box where the 'original production rules' are contained within this black box. In Work, before a query is submitted, a user can modify the data, arguably changing the original rules through his or her modifications. Rather than using an explicit strategy, the rules are modified by the Work user off-line, before the query, as opposed to being part of a strategy sent along with the query such as that of the instant invention.

Work's paragraph 22 describes a component within the black box - consisting of data (not production rules), where the user can modify this data. Work's paragraph 25 states that this modification is not part of the query (or in Work, 'the inquiry'). Regardless, the system is not augmenting production rules as part of a search strategy, but rather modifying data of a pre-programmed component within the black box.

Paragraph 025 of Work defines "the Inquiry" as "… a natural language query, a Boolean logic query specifying one or more search terms, or any combination thereof." This specifically defines what comes from the user at search time - it is by-definition not a strategy. In effect Work shows a system where a user - offline (before the search) can re-program the hard-coded rules through altering the data. Although this might sound similar to instant Invention, it is quite different as the instant system sends the query

along with the strategy (which would contain the 'alterations') as opposed Work/Overview's modifying the system's data off-line prior to search.

In contrast, the system of Fig. 1D described in the instant specification is an example of a strategic-based system by adding an extra input "search strategy," which is sent along with a search query and can modify the default selection policy during run-time.

In Fig. 1D, information is searched in accordance with a specified strategy for a search system having a plurality of resources and production rules for using, ordering and/or manipulating those resources. Based on the strategy provided to the search system, the search system augments its production rules based on a search strategy known by the search system and dynamically determines at run-time the selection or order of said resources according to the production rules along with the augmented production rules. The strategy might modify a small part, such as switching resources such as search modules so that if a particular condition is false, the system dynamically makes the decision to run another module ahead of the specified module, for example. Although the sequence of executed resources shown in Fig. 1D happens to be identical to the default sequence, one module can be executed ahead of another module based on the condition, for example. The search strategy, among other things might introduce new conditions not previously specified by the default rules.

Work simply fails to show a search system that augments its production rules and dynamically determines at run-time the selection or order of said resources according to said production rules along with the augmented production rules. Hence Work cannot render claim 1 obvious.

Additionally, neither Work nor Overview dynamically determines at run-time the selection or order of said resources according to the production rules along with the augmented production rules since neither (individually or in combination) augment production rules as part of a strategy.

In sum, neither Work nor Overview, singly or in combination, can render claims 1, 25 and 31, as well as those dependent therefrom claim 1 obvious. Further, Work and Huffman fail to show the specific recited element(s) recited in the dependent claims 1, 25 and 31 as shown below.

Turning now to dependent claim 2, paragraph 0022 completely fails to show placing additional constraints on the production rules at run-time. Specific discussion of this aspect should be provided or the rejection should be withdrawn. As for claim 3, Applicants fail to find in paragraph 0024 the discussion on "engines can be turned off or not search." Additionally, this does not equate to nullifying one or more of the production rules at run-time. As for claim 4, paragraph 0022 mentions that "[t]he configuration attributes can include pre-configured data as well as user configured data." However, the pre-configured and user configured data are formed before run time and thus Work is completely different from the claimed specifying the search strategy during run-time.

As for claim 5-9, Work fails to disclose the claimed search strategy as discussed above in response to the rejection of claim1.

As for claim 10 Work fails to disclose the search strategy as applied to one of query processing resource, result processing resource and data resource.

As for claim 11 paragraph 0022 and paragraph 0028 of Work fails to disclose the search strategy and further fails to disclose dynamic determining is controlled in accordance with the search strategy and a system state.

As for claim 12, nowhere in Work does it disclose the system state comprises a query. Paragraph 0028 is simply irrelevant to the elements recited in claim 12.

As for claim 13, Work simply fails to show the system state with one or more messages passed among the resources. Work paragraphs 0029 simply mentions that "the research engine can generate and send queries based upon the initial inquiry" and paragraph 0030 states "[f]or example, from each of the target search engines, the research engine can receive a listing of references in response to the queries provided".

As for claim 14-17, Work's paragraphs 0029 shows that the research engine can generate and send queries based upon the initial inquiry. However, Work fails to show the search strategy and further fails to teach the claimed "modifying a query message received from one of the resources during one of said search passes for use in a subsequent pass".

As to claim 15, paragraph 26 of Work teaches that the research engine can determine whether a relevant research model exists. However, Work fails to show the modifying the query message and the adding, deleting or changing of one or more keys in the query message.

As for claim 16, Work mentions recursive searching in paragraph 0029. However, Work fails to show the modifying the query message and further fails to disclose the modifying a data request received from one of the resources during one of said search passes for use in a subsequent pass.

As for claim 17, paragraph 26 of Work teaches that the research engine can determine whether a relevant research model exists. However, Work fails to show the modifying the query message and the assigning deleting or changing of one or more keys in the query message.

As for claim 18-19, Work's paragraphs 0038 and 0039 relates to summarizing information discovered as a result of the inquiry from a research model and to identify patterns within the research model. However, Work fails to show claim 18's adding a data request directed at one of the resources over a route and altering the route during one of said search passes for use in a subsequent pass. Further, Work fails to disclose claim 19's directing a query message at one of the resources over a route and altering the route during one of said search passes for use in a subsequent pass.

As for claim 20, Work paragraph 35 teaches that key relationships can be determined and within the research rules data store, the research rules can specify various word relationships for which the research engine can search in the extracted text. However, Work does not disclose the claimed specifics of locally routing a message received from one of the resources during one of said search passes for use in a subsequent pass.

As for claim 22, Work's paragraph 0039 mentions that the research engine can apply the research rules to the research model and formulate additional sub-queries to provide the target search engines and that the sub-queries can specify new combinations of search terms such as domain types, domain subtypes, and attributes as determined from the research rules and the relational graph. However, Work fails to disclose the

claimed answering or generating one or more control messages received from one of the resources during one of said passes for use in a subsequent pass.

As for claim 23, Work's paragraph 40 discloses that the execution of exemplary pattern rules can generate sub-queries and the results of the sub-queries can be incorporated into the existing research model. However, this does not show the claimed updating a next pass condition received from one of the resources during one of said search passes for use in a subsequent pass.

As for claim 24, paragraph 0037 shows that the word and/or text associations identified within relevant text passages can be recursively identified within newly determined search results and recursively submitted to the various search engines to progressively acquire additional information. However, Work does not show optimizing a search result given the strategy and the production rules. In fact, the word "optimizing" is not used anywhere in Work.

As to claims 25 and 28, Applicants traverse the rejection based on the same traversal of the rejection of claim 1.

As to claims 29-35, Applicants traverse the rejection based on the same traversal of the rejection of claims 1-4, 7, 8 and 11.

Applicants respectfully submit that all claims are in condition for allowance. Withdrawal of the rejection is respectfully requested.

Please charge the fee for the new claim to Deposit Account 140627.

If for any reason the Examiner believes that a telephone conference would in any way expedite prosecution of the subject application, the Examiner is invited to telephone the undersigned.

Respec tfully submitted

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